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EXAMINER	
TUCKER, WESLEY J	

ART UNIT	PAPER NUMBER
2624	

DATE MAILED: 06/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/725,537	MCCLURG ET AL.	
	Examiner	Art Unit	
	Wes Tucker	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30,32 and 34-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30,32 and 34-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2-23-06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 24th 2006 has been entered.

Response to Amendment

2. Applicant's amendment filed May 24th 2006 has been entered and made of record.

3. Applicant has amended claims 1, 2, 21, 26, 27 and 29. New claims 35 and 36 have been added. Claims 31 and 33 have been cancelled. Claims 1-30, 32 and 34-36 are now pending.

4. Applicant's remarks in view of the amended claims have been fully considered but are not found persuasive for at least the following reasons:

Applicant has amended the independent claims 1 and 27 to include the feature of: wherein the image data represents substantially all of the print area of the hand of the person, while the hand is stationary on the non-planar prism. .

This feature was added to distinguish over the prior art of Maase who teaches taking two images of the palm and fingers of a hand and later combining them if needed. In the previous Office Action, this feature was rejected as a one reference 103 obviousness rejection in view of Maase because it would have been obvious to modify the invention of Maase to make the curved prism large enough to image the entire hand. Also for someone with smaller hands, the prism surface of Maase is already big enough to receive an image of the entire handprint. A change in size of the prism in Maase does not teach away from the use of the invention. Furthermore no hindsight is needed to change the size of the image capture area. It should be clear that it would be obvious to one of ordinary skill in the art to simply use a bigger surface to capture an entire handprint image. A new rejection is presented with a secondary reference of Lafreniere to teach the practice of using a surface to capture an entire handprint image.

Claim Rejections - 35 USC § 112

Withdrawal

5. The 112 rejection previously applied to independent claims 1 and 27 are hereby withdrawn in view of Applicant's amendment.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1, 2, 4-11, 13-21, 23-24, and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination U.S. Patents 5,528,355 to Maase et al. and 4,821,118 to Lafreniere.

With regard to claim 1, Maase discloses a system for capturing biometric data, comprising:

A non-planar prism comprising a curved portion and a planar portion, non-planar prism configured to be illuminated by a light source (Fig. 6); and

A scanning optical system configured to capture image data of a print area of a hand of a person interacting with the non-planar prism (Figs. 1B and 3 and column 2, lines 35-55).

Maase discloses capturing two half images of the users hand print and then combining them (column 2, lines 50-55), does not explicitly disclose wherein the image data represents substantially all of the print area of the hand of the person, while the hand is stationary on the non-planar prism.

Lefreneire teaches the practice of capturing the entire handprint while the hand is in contact with an imaging surface (Fig. 1, element 3, Fig. 3, element 4, and Fig. 4, element 37).

It would be an obvious modification to the invention of Maase to increase the surface area of the imaging system in order to capture and entire handprint image

because for obvious reasons, the entire handprint image offers more identification information about the user than does a partial handprint image. It would further be obvious to modify the size of the handprint imaging surface to accommodate the different sizes of hands of users. For example, for a person with small hands, like a child, the surface of Maase is already large enough to accommodate the entire handprint. Therefore it would have been obvious to modify the invention of Maase to increase the size of the imaging surface in order to acquire an image of an entire handprint of a user as shown by Lafreniere in order to obtain more complete user identification information from the entire handprint.

With regard to claim 2, Maase discloses the system of claim 1, wherein:

The curved portion configured to receive the print area of hand of the person on a first, outside surface (Fig. 3, surface 11) and to totally internally reflect light beans from the light source (Fig. 3, element 36) from a second, inside surface (Fig. 3, element 30).

Maase further discloses the planar portion is coupled at an angle to the curved portion through which the totally internal reflected light exits to be received by the scanning optical system (Fig. 3, elements 38 and 44).

With regard to claim 4, Maase discloses the system of claim 1, wherein an image in the scanning optical system rotates a received image to perform the scanning (Fig. 6).

With regard to claim 5, Maase discloses a dove prism (Fig. 6).

With regard to claim 6, Maase discloses the system of claim 1, wherein the scanning optical system moves along an arcuate path to capture radial scan line images transmitted through a base of the non-planar prism (Fig. 3, element 28). Here the arc of the curved surface is where the image is captured using scan lines projected by the light source.

With regard to claim 7, Maase discloses the system of claim 1, further comprising a processing system that converts the captured image into transmissible information that is transmitted by a communications system (column 10, lines 7-18).

With regard to claim 8, the discussion of claim 7 applies. Maase discloses the communication data, but does not disclose Firewire. However it follows that communications systems utilizing FIREWIRE are exceedingly well known in the art. Official notice is taken. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use Firewire as a means of transmitting data as is well known in the art.

With regard to claim 9, Maase discloses the system of claim 1, further comprising a processing system comprising a means for converting the captured image data from a

first coordinate system into image data in a second coordinate system (Figs. 4A-4C and 12). The first coordinate system is the coordinates of the scanning surface that must be reflected through the imaging system to a second set of imaged coordinates.

With regard to claim 10, Maase discloses the system of claim 9, wherein the first coordinate system is a surface of the non-planar prism and the second coordinate system is a planar coordinate system (Figs. 4A-4C and 12). The first coordinate system is the coordinates of the scanning surface that must be reflected through the imaging system to a second set of imaged coordinates.

With regard to claim 11, Maase discloses the system of claim 1, further comprising an encoder configured to encode a position of the scanning optical system and to generate encoder data (column 5, lines 45-50). The stepper system steps the scanning system. In order to later assemble the scan lines; the position of the scanner must be encoded.

With regard to claim 13, Maase discloses the system of claim 1, wherein the non-planar prism and the scanning optical system are configured to capture a palm print image as the image data (Fig. 2A and 2B).

With regard to claim 14, Maase discloses the system of claim 1, wherein the non-planar prism and the scanning system are configured to capture palm print and

fingerprint images as the image data (Figs. 2A and 2B). The discussion of claim 1 also applies.

With regard to claim 15, Maase does not explicitly disclose capturing both palm print images. However in Figs. 1A-1C the surface appears big enough o capture both palms and would be an obvious modification in design to make the surface big enough to capture both palm prints. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to make the surface big enough to accommodate both a users palms in order to capture both palms in a single image scan. The discussion of claim 1 also applies.

With regard to claim 16, the discussion of claim 15 applies for the same reasons. If the curved surface (104) is big enough to accommodate both hands, then it follows that prints from both hands palms and fingers can be captured. The discussion of claim 1 also applies.

With regard to claim 17, the discussion of claim 15 applies. The discussion of claim 1 also applies.

With regard to claim 18, the discussion of claim 15 applies. Maase displays a writers palm as a part of the entire palm (Fig. 11A). The discussion of claim 1 also applies.

With regard to claim 19, the discussion of claim 18 applies. The discussion of claim 1 also applies.

With regard to claim 20, Maase discloses the system of claim 1, wherein the light source is positioned to direct light from the light source to an inside surface of the curved potion of the non-planar prism configured to totally internally reflect the light so that the light exits the planar portion of the non-planar prism (Fig. 6).

With regard to claim 21, Maase discloses the curved portion has a surface area sized to receive a hand and the discussion of claims 14-19 applies to the size of the cylinder to be used. Maase further discloses the planar portion is located at an angle with respect to the curved portion and has a smaller surface area than the curved portion (Fig. 6). The discussion of claim 1 also applies.

With regard to claim 23, Maase discloses the system of claim 1, wherein the light source is position proximate a chamfered edge of the prism (Fig. 3, elements 36 and 30).

With regard to claim 24, the discussion of claims 7 and 8 applies.

With regard to claim 27, Maase discloses a system for capturing biometric data comprising:

A non-planar prism configured to totally internally reflect light from a curved portion (Fig. 3, element 28), such that the totally internally reflected light exits a planar portion (Fig. 3, element 32).

Maase further discloses an image capturing system that receives the totally internally reflected light and generates image data therefrom of a print area of a hand of a person interacting with the curved portion (column 4, lines 56-67).

Maase discloses capturing two half images of the users hand print and then combining them (column 2, lines 50-55), does not explicitly disclose wherein the image data represents substantially all of the print area of the hand of the person, while the hand is stationary on the non-planar prism.

Lefreneire teaches the practice of capturing the entire handprint while the hand is in contact with an imaging surface (Fig. 1, element 3, Fig. 3, element 4, and Fig. 4, element 37).

It would be an obvious modification to the invention of Maase to increase the surface area of the imaging system in order to capture and entire handprint image because for obvious reasons, the entire handprint image offers more identification information about the user than does a partial handprint image. It would further be obvious to modify the size of the handprint imaging surface to accommodate the different sizes of hands of users. For example, for a person with small hands, like a child, the surface of Maase is already large enough to accommodate the entire handprint. Therefore it would have been obvious to modify the invention of Maase to increase the size of the imaging surface in order to acquire an image of an entire

handprint of a user as shown by Lafreniere in order to obtain more complete user identification information from the entire handprint.

With regard to claim 28, Maase discloses wherein the image capturing system comprises a stationary lens (Fig. 3, element 46) and a stationary large area array (Fig. 2, elements 44 and 48).

With regard to claim 29, Maase discloses wherein the lens is sized to capture all light leaving the non-planar prism that has been totally internally reflected from a section of the non-planar prism proximate an area in which the person interacted with the non-planar prism (Fig. 6).

7. Claims 3, 12, 22 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of U.S. Patents 5,528,355 to Maase et al. and 4,821,118 to Lafreniere and in further view of 4,684,802 to Hakenworth et al.

With regard to claim 3, Maase and Lafreniere disclose the system of claim 1, but does not explicitly disclose wherein the scanning optical system rotates around an axis of symmetry of the non-planar prism. Hakenworth discloses a scanning optical system that rotates around an axis of symmetry (Fig. 1). Hakenworth teaches that this embodiment of a rotating image capture system enables an increased image area even

though the finger contact surface is a cylindrical elliptical surface. Therefore it would have been obvious to one of ordinary skill in the art to use a rotating optical system as taught by Hackenworth in combination with that of Maase in order to enable an increased image area of the curved surface contact area.

With regard to claim 12, Hakenworth discloses, wherein the scanning optical system comprises a control system configured to control a motor, belt, and pulley system (Fig. 1, element 16).

With regard to claim 22, Hakenworth discloses the system of claim 1, wherein the light source is positioned within a cylindrical opening running along an axis of symmetry of the prism (Fig 1. element 10).

With regard to claim 30, the discussion of claim 3 applies.

8. Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of U.S. Patents 5,528,355 to Maase el al. and 4,821,118 to Lafreniere and further in view of U.S. Patent 5,825,474 to Maase, now refereed to as [Maase474].

With regard to claim 25 and 26, Maase and Lafreniere disclose the system of claim 1, but do not disclose an air treatment system to heat, sanitize, ionize or

dehumidify the non-planar prism and/or portion of the person. [Maase474] teaches the use of a heating system to inhibit condensation of moisture on the finger receiving surface (column 5, lines 60-67). [Maase474] also teaches that a high pressure blower can also be used to direct air across the receiving surface of the finger receiving surface in order to dry the moisture of the user's hand (column 2, lines 25-30). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use an air treatment system to heat the surface of the surface of Maase in order to control the amount of moisture on the receiving surface as taught by [Maase474] in order to maintain a dry and accurate imaging surface.

9. Claims 32 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of U.S. Patents 5,528,355 to Maase el al. and 4,821,118 to Lafreniere and further in view of U.S. Patent 4,790,260 to Asano et al.

With regard to claim 32, Maase and Lafreniere disclose the system of claim 1, but does not expressly disclose wherein the non-planar prism comprises a conical prism. Asano discloses the use of a conical prism in order to cause a conical divergence of the imager. Therefore it would have been obvious to one of ordinary skill in the art to use a conical prism in conjunction with the non-planar prism of Maase to cause a conical divergence in the imager.

With regard to claim 34, the discussion of claim 32 applies.

New Claims

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 35 and 36 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. As claims 35 and 36 are interpreted, it appears that Applicant is attempting to claim that the non-planar prism discloses is capable of capturing both the palm of the handprint as well as the writer's palm or "a second print area of a side of a hand extending from the palm up the side of the hand" all while the user's hands are stationary on the conical prism. This does not appear to be physically enabled as shown in the specification in Fig. 15, when the writer's palm is in contact with the conical prism it does not appear possible that the inner palm of the hand can also be in contact with the prism. Only the fingertips can make contact when the writer's palms are placed on the surface of the prism (as pictured in fig. 15). Clarification is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 35 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5, 745, 591 to Maase et al.

With regard to claim 35, Maase discloses a system comprising: a non-planar prism (Fig. 1, element 12); and a scanning optical system (Fig. 6). Maase further discloses that the scanning optical system captures a first print area of a palm (Fig. 2B) and a second print area of a side of a hand extending from the palm up the side of the hand, while the palm and the side of the hand are interfacing with and stationary on the non-planar prism (Fig. 2B, element 26). The language in claim 35 is vague, so the image of Fig. 2B is interpreted to read on the language. Maase discloses capturing an image of a palm which also is interpreted to include "a second print area of a side of a hand extending from the palm up the side of the hand." The problem with this phrase is that it is unclear where the "palm" ends and where the "side of the hand" begins. Is the palm just the cupped area in the middle of the open hand, if so, the side of the hand clearly reads on the area outside that cupped region as pictured in Fig. 2B. If the "side of the hand" is meant by Applicant to refer to the before mentioned "writer's palm", another reference has been cited for Applicant's consideration.

U.S. Patent 5,745,591 to Feldman discloses another palm print that appears to be the writer's palm that may or may not be what applicant intends to claim. (Figs. 1-3).

Feldman discloses imaging this area of a handprint as a means of identification. Therefore it would have been obvious to one of ordinary skill in the art to enable the surface of Maase to accept a hand in the position of the hands pictured in Feldman for identification purposes. Indeed the invention of Maase would accept such a hand already. It is only a matter of how the user places his/her hand on the imaging surface of Maase which determines what area of the hand will be used for identification purposes. Applicant is hereby advised to clarify what exactly is claimed in claims 35 and 36.

With regard to claim 36, similar discussion applies.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wes Tucker whose telephone number is 571-272-7427. The examiner can normally be reached on 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on 571-272-2214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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6-13-06

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